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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,793	06/30/2003	Ronald D. McCallister	CREST.0100	1304

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EXAMINER

TRINH, SONNY

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,793	Applicant(s) MCCALLISTER, RONALD D.	
	Examiner Sonny TRINH	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 22-36, 44-58, 66-79, 81-83 and 85 is/are rejected.
- 7) ☒ Claim(s) 15-21, 37-43, 59-65, 80 and 84 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 2-22, 24-44, 46-66, and 68-85** are objected to because of the following informalities:

The first letter "A" at the beginning of each of the above claims should be changed to –"The"–to avoid antecedent problems. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-2, 6-7, 8-14, 23-24, 28-29, 32-36, 45-46, 50-51, 54-58, 67-68, 71-79, 81-83** are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (hereinafter "Kim"; U.S. Patent Application Publication US 2003/0086507 A1).

Regarding **claim 1**, with reference to figures 1-2 and descriptions on pages 2-3, Kim discloses a communication system, comprising: a transmitter (figure 1, transmitter 50), comprising: an excursion signal generator configured to

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identify an excursion in a first signal exceeding a threshold (figure 2, peak search detector 110); and an excursion reducer responsive to the excursion signal generator and configured to subtract the excursion from the first signal (figure 2, clipping filter 125); and a receiver configured to receive the first signal (inherent).

Regarding **claim 2**, Kim further teaches that transmitter further comprises a filter system (figure 2, clipping filter 125), wherein: the excursion signal generator is configured to generate an excursion signal corresponding to the excursion (paragraphs [0029] – [0030], [0038]); the filter system is configured to filter the excursion signal; and the excursion reducer is configured to subtract the filtered excursion signal from the first signal ([0049] – [0052]).

Regarding **claim 6**, Kim further teaches that the first signal is a wireless communication signal ([0053]).

Regarding **claim 7**, Kim further teaches that the first signal is a composite signal comprising a plurality of individual signals (figure 2, signal combiner 55, please see description of figure 2).

Regarding **claim 9**, Kim further teaches that the excursion signal generator is configured to calculate a magnitude of the first signal, compare the magnitude to the threshold, and generate an excursion signal (paragraph [0012]).

Regarding **claim 8**, since Kim teaches that the excursion signal generator is configured to calculate a magnitude of the first signal, compare the magnitude to the threshold, and generate an excursion signal as in claim 9, it is obvious that the a phase of a signal peak is not considered.

Regarding **claims 10-12**, Kim further discloses the the excursion signal generator is further configured to add a pedestal to the excursion signal and wherein a magnitude of the pedestal is calculated according to at least two samples in the excursion and wherein the excursion signal corresponds to a difference between a magnitude of the first signal and the threshold if the magnitude of the first signal exceeds the threshold (paragraph [0012]).

Regarding **claim 13**, Kim further teaches that the excursion signal has a duration that is substantially identical to a duration of the excursion (paragraph [0030]).

Regarding **claim 14**, since Kim teaches that the excursion signal generator comprises: a peak identification system configured to identify a peak in the first signal; and a waveform generator responsive to the peak identification system and configured to generate the excursion signal according to at least one of the magnitude and the occurrence of the peak (paragraph [0048]).

Regarding **claims 23-24, 28-36, and 45-46, 50-58**, these claims merely reflect the signal processing system and transmitter system as opposed to the communication system of claims 1-2, 6-14 (respectively) and are therefore rejected for the same reasons.

Regarding **claims 67-68**, these claims merely reflect the method claim necessary for the communication system of claims 1-2 (respectively) and are therefore rejected for the same reasons.

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Regarding **claims 71-79**, these claims merely reflect the method claim necessary for the communication system of claims 6-14 (respectively) and are therefore rejected for the same reasons.

Regarding **claim 81**, Kim further teaches that the threshold comprises a selected threshold from a plurality of thresholds (claims 6-7, 16, 18).

Regarding **claim 82**, Kim further teaches the adjusting of the magnitude of the excursion signal according to the magnitude of a proximate peak to the peak (claims 11, 16).

Regarding **claim 83**, Kim further teaches that the proximate peak is defined according to a selected range of samples from the peak (paragraphs [0046] - [0052]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 3, 25, 47, 69** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

Regarding **claim 3**, Kim discloses the invention but does not disclose that the filter system is configured to filter frequencies outside of a regulatory spectral mask. However, using filter to ensure that the transmitted signal fits within the

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specified spectral mask as specified by the FCC (and other regulatory bodies) is well known and would have been obvious to a person of ordinary skill in the art. The motivation for configuring the filter frequencies outside of a regulatory spectral mask is to make sure that the frequencies are within the specification set by the regulatory bodies such as the FCC.

Regarding **claims 25, and 47**, these claims merely reflect the signal processing system and transmitter system as opposed to the communication system of claim 3 and are therefore rejected for the same reasons.

Regarding **claim 69**, this claim merely reflects the method claim necessary for the communication system of claim 3 and is therefore rejected for the same reasons.

4. **Claims 4-5, 22, 26-27, 44, 48-49, 66, 70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Busson et al. (hereinafter "Busson"; U.S. Patent Application Publication Number 2003/0053562 A1).

Regarding **claim 4**, Kim discloses the invention but does not explicitly disclose that the filter system comprises more than one stage, and wherein each stage is configured to filter a channel of the first signal.

In an analogous art, Busson discloses the electronic component allowing the decoding of a radiofrequency transmission channel (abstract). Busson further discloses that the filter system comprises more than one stage (claims 1, 6, 8, paragraph [0010]), and wherein each stage is configured to filter a channel of the first signal (claims 1, 8).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to incorporate the filter stages, as taught by Busson, to the system of Kim. The motivation for using filter stages is to facilitate a better pass-band transmission which results in low cross talk between channel.

Regarding **claims 26, and 48**, these claims merely reflect the signal processing system and transmitter system as opposed to the communication system of claim 4 and are therefore rejected for the same reasons.

Regarding **claim 5**, Busson further discloses that at least one stage includes a phase correction element configured to compensate for phase changes in the first signal (claims 1, 6).

Regarding **claims 27, and 49**, these claims merely reflect the signal processing system and transmitter system as opposed to the communication system of claim 5 and are therefore rejected for the same reasons.

Regarding **claim 22**, Busson further discloses that the transmitter further comprises a phase compensation system configured to compensate for phase changes in the first signal (claims 1, 6-8, [0018], [0032]).

Regarding **claims 44, and 66**, these claims merely reflect the signal processing system and transmitter system as opposed to the communication system of claim 22 and are therefore rejected for the same reasons.

Regarding **claims 70, 85**, these claims merely reflect the method claim necessary for the communication system of claims 5, 22 (respectively) and are therefore rejected for the same reasons.

Allowable Subject Matter

5. **Claims 15-21, 37-43, 59-65, 80** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claims 15, 37, 59 and 80**, the applied references fail to disclose or render obvious the claimed limitations, specifically wherein the peak comprises a set of three consecutive samples, wherein the middle sample has a higher magnitude than the first and third samples.

Regarding **claims 16, 38 and 60**, the applied references fail to disclose or render obvious the claimed limitations, specifically wherein the waveform generator comprises: a peak response system configured to generate the excursion signal; and a scaling system configured to adjust the magnitude of the excursion signal.

Regarding **claim 84**, the applied references fail to disclose or render obvious the claimed limitations, specifically wherein the step of adjusting the magnitude of the excursion signal includes adjusting the magnitude of the excursion signal according to the relative magnitudes of the proximate peak and the peak.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonny TRINH whose telephone number is 571-272-7927. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward URBAN can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/14/06


SONNY TRINH
PRIMARY EXAMINER